ANNUAL REPORT FOR 2006

US 64 Bypass Mitigation Site
Tyrrell County
TIP No. R-2548E

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North Carolina Department of Transportation
December 2006

TABLE OF CONTENTS

FIGURES

APPENDICES

SUMMARY

The US 64 Bypass Mitigation Site is located in Tyrrell County. The site was planted in December 2005 and was designed as mitigation for wetland impacts associated with roadway project R-2548.

The mitigation encompasses approximately 6.13 acres total of wetland restoration. The restoration effort involved the removal of the roadbed to existing wetland elevation, undercutting approximately 12 inches of soil, and back filling with available material. The site was then planted and will be monitored to ensure that it meets the vegetation success criteria. No hydrologic monitoring is required for this project; however, vegetation monitoring is required for five years.

There were 3 vegetation monitoring plots established throughout the 6.13 acre planting area. The 2006 vegetation monitoring of the site revealed an average tree density of 306 trees per acre. This average is below the minimum success criteria of 320 trees per acre.

NCDOT will supplementally plant and continue vegetation monitoring of this site.

1.0 INTRODUCTION

1.1 Project Description

The US 64 Bypass Mitigation Site is located at the existing US 64 roadbed in Tyrrell County just west of Columbia (Figure 1). The site consists of approximately 6.13 acres of mitigation for wetland impacts associated with project R-2548.

1.2 Purpose

In order for a mitigation site to be considered successful, a site must meet vegetation success criteria. This report details the vegetation monitoring in 2006 at the US 64 Bypass Mitigation Site. Hydrologic monitoring was not required for the site.

1.3 Project History

December 2005	Site planted
August 2006	Vegetation Monitoring (1 year)

2.0 VEGETATION: US 64 BYPASS MITIGATION SITE (YEAR 1 MONITORING)

2.1 Success Criteria

Success Criteria states that the permittee must attain and document a minimum survival rate of 320 planted trees per acre surviving for the first three years, decreasing by 10 percent for years four and five (260 trees per acre minimum for year five).

2.2 Description of Species

The following wetland species were planted in the Wetland Restoration Area:

Nyssa sylvatica var. *biflora*, Swamp Blackgum

Taxodium distichum, Baldcypress

Quercus phellos, Willow Oak

Nyssa aquatica, Water Tupelo

Chamaecyparis thyoides, Atlantic White Cedar

Quercus lyrata, Overcup Oak

2.3 Results of Vegetation Monitoring

Plot #	Swamp Blackgum	Baldcypress	Willow Oak	Water Tupelo	Atlantic White Cedar	Overcup Oak	Total (Year 1)	Total (at planting)	Density (Trees/Acre)
1	3	3	1	3	3	1	14	31	307
2	8			3	1		12	32	255
3	6	10	1	4	1		22	42	356
Average Density (Trees/Acre)									306

Site Notes: Vegetation plots 1 and 2 are 50 x 50 foot plots. Vegetation plot number 3 is 100 x 25 foot due to the location where the plot was set. The planted trees had heavy herbaceous competition on site which may be the result of the low stem counts. Other species noted include: fennel, *Juncus* sp., tearthumb, cattail, woolgrass, foxtail, cut grass, red maple, and various grasses.

2.4 Conclusions

There were 3 vegetation monitoring plots established throughout the 6.13 acre planting area. The 2006 vegetation monitoring of the site revealed an average density of 306 trees per acre. This average is below the minimum success criteria of 320 trees per acre for year one.

3.0 Overall Conclusions and Recommendations

The following report summarizes the monitoring activities that have occurred in the past year for the US 64 Bypass Mitigation Site. Monitoring activities in 2006 represent the first year of monitoring for the site. The site must demonstrate vegetation success for a minimum of five years or until the site is deemed successful.

There were 3 vegetation monitoring plots established throughout the 6.13 acre planting area. The 2006 vegetation monitoring of the site revealed an average density of 306 trees per acre. This average is below the minimum success criteria of 320 trees per acre for year one.

NCDOT will supplementally plant and continue vegetation monitoring at the US 64 Bypass Mitigation Site.

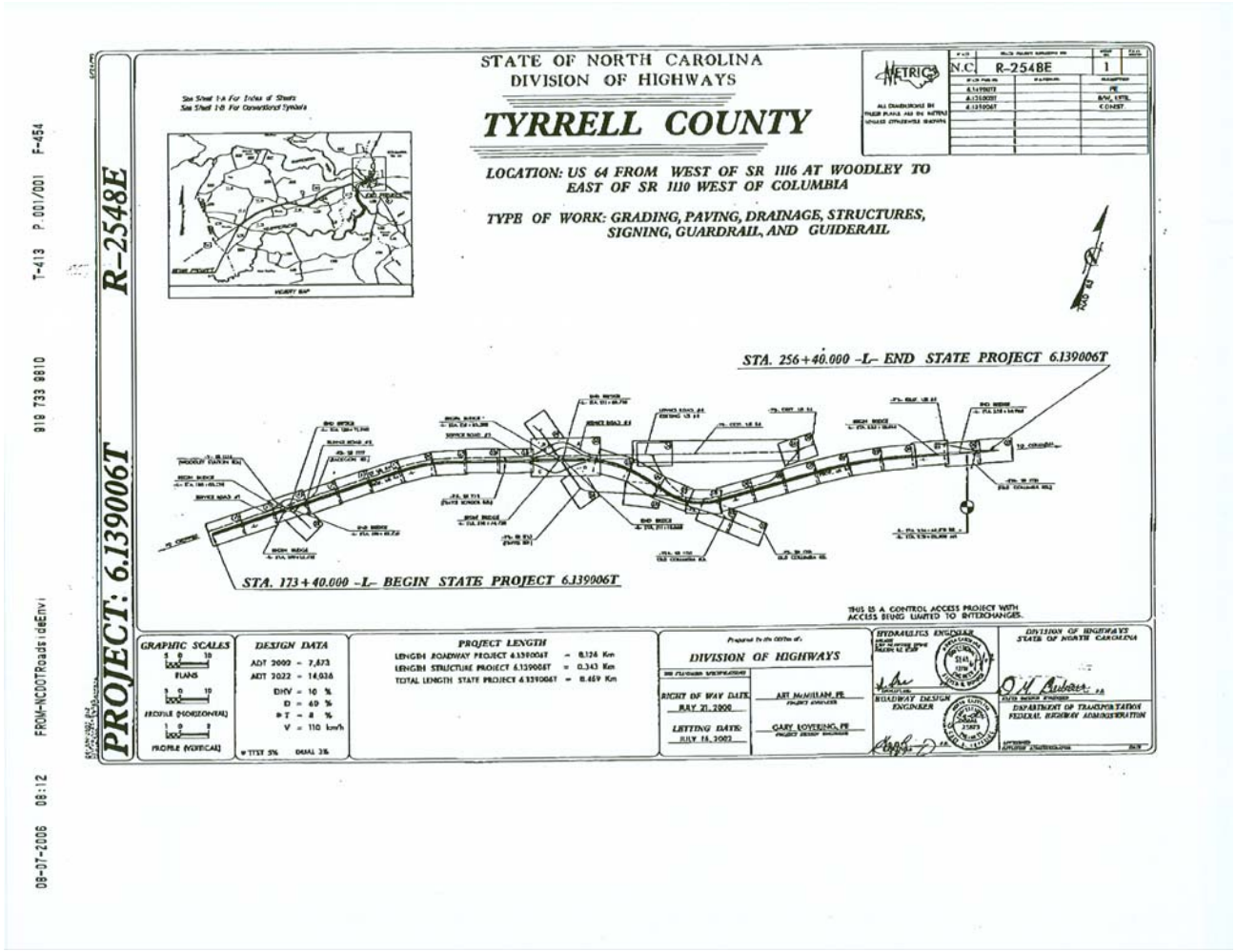

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
TYRRELL COUNTY
N.C. R-2548E
LOCATION: US 64 FROM WEST OF SR 1116 AT WOODLEY TO EAST OF SR 1110 WEST OF COLUMBIA
TYPE OF WORK: GRADING, PAVING, DRAINAGE, STRUCTURES, SIGNING, GUARDRAIL, AND GUIDERAIL
STA. 256+40.000 -L- END STATE PROJECT 6.139006T
STA. 173+40.000 -L- BEGIN STATE PROJECT 6.139006T
THIS IS A CONTROL ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.
PROJECT: 6.139006T R-2548E
GRAPHIC SCALES
DESIGN DATA
PROJECT LENGTH
DIVISION OF HIGHWAYS
HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION
08-07-2006 08:12 FROM-NCDOTRoadsideEnvi T-413 P.001/001 F-454 919 733 9810

Figure 1

APPENDIX A

SITE PHOTOS

US 64 Bypass

Photo 1

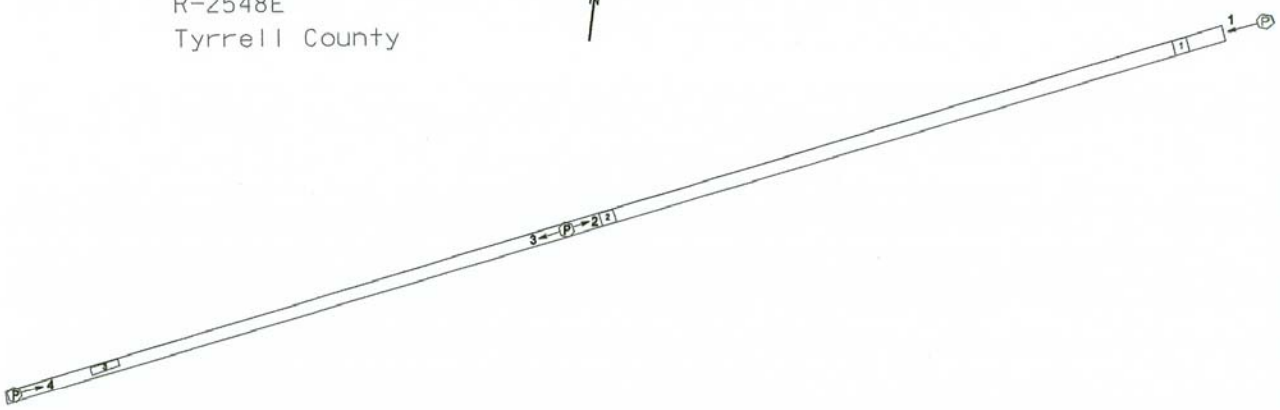
Photo 2

Photo 3

Photo 4

August 2006

US 64 Bypass Site
R-2548E
Tyrrell County



Vegetation Plot Locations
Photo Locations